

said grid pattern of resilient sections constituting means for providing a multiplicity of sections of substantial height that sway laterally to a substantial extent independently of one another to a substantial extent in response to forces applied by the foot, for reducing shear stresses on the bottom of a foot as the user walks along.

REMARKS

Introductory Remarks

Initially, with regard to the Reissue Declarations, we appreciate the courtesy of the Examiner in deferring these Declarations until the claims are finalized. Incidentally, Declarations referencing the current claims have now been sent to the inventors for signature. In addition, we wish to thank the Examiner for the thoroughness of the Office Actions, as a patent is strengthened when all possible areas of rejection have been considered.

Now turning to the present amendment, by the present amendment a number of claims have been amended and several new claims have been added.

Before reviewing the specific rejections and the newly presented claims in detail, it is considered that certain general comments are in order.

Constitutional Provision

The Constitution of these United States includes the following provision, see Article 1, Section 8, Clause 8.

“The Congress shall have power.... to promote the progress of the useful arts by securing to.... inventors the exclusive rights to their discoveries.”

Thus, the “Founding Fathers” in their wisdom recognized that patents should be granted for inventions, in order to encourage innovation and the effort needed to bring an invention to fruition. This includes encouraging research and development and the attendant costs thereof.

However, it sometimes has seemed that the prosecution of the present application by the Patent Office has involved rejecting, rejecting and more rejecting. In this regard, it is

respectfully suggested that the Patent Office should view as one of its responsibilities, the duty to grant patents on worthwhile inventions, to encourage costly research and development instead of finding all possible grounds of rejection, however remotely related to the issues at hand.

Reissue Statute

In the course of the prosecution of the present Reissue application, it sometimes appears that the Patent Office is opposed to broadened Reissues, and develops all possible objections and rejections, some of which are clearly not applicable to the present application, in order to prevent the allowance of a broadened reissue.

However, the reissue statute itself, 35USC251, states as follows:

“No reissued patent shall be granted enlarging the scope of the claims of the original patent unless applied for within two years from the grant of the original patent”.

Thus, the statute itself clearly authorizes the grant of broadened reissues, when timely filed, and they should be treated in just the same manner as original patent applications as far as 35 USC 102, 103 and 112 issues are concerned. However, in the present case it sometimes appears that the Patent Office may be taking an unreasonably negative view toward granting appropriate protection in this reissue case.

Skilled in the Art

35USC 103 sets forth the unobviousness criteria for patentability, and specifies that the criteria is applicable to persons having ordinary skill in the art to which the subject matter pertains. In the present case, the field which is involved is the treatment and prevention of foot ulcers on patients such as diabetic patients, or others with similar problems. Accordingly, for prior art references to be validly combined, they should relate to problems of healing ulcers on patients having special problems, such as poor circulation, thin and tender skin, and the like. Persons skilled in the art would not consider many of the cited prior art patents pertinent or

relevant to the present invention, which solves a unique problem relating to diabetic type patients.

“A Poor Man’s Tale of a Patent” by Charles Dickens

This is a Tale by a famous author of the trials and tribulations of an inventor in his efforts to obtain a patent many years ago; and it seems that the situation is not unchanged a century or two later. A copy of this Tale is attached to this amendment.

Thus, considering the rejections which have been applied to the claims in this case, we note the following rejections:

1. A rejection based on supposed “recapture” of cancelled subjected matter, where the claims are considered to have had different subject matter than those which have been cancelled.

2. The rejection on the Andrews patent alone or in combination with other patents. We have pointed out the impracticality of the Andrews structure where the relieved areas are fixed in location with no teaching of the significant problems of foot ulcers appearing in different locations and of different sizes, nor of changing requirements for relieved areas; nor has the Patent Office faced up to discuss these shortcomings of the Andrews structure.

3. The rejection based on the Kellerman patent either alone or in combination with other references. Kellerman has removable sections on the sole of his foot not adjacent the foot; and one must turn the reference upside-down to approach applicant’s structure.

4. The combinations of references with no valid teaching for the combinations. Applicant’s have invented a new and unobvious insole construction for the treatment of diabetic foot ulcers, which has unique features not shown by the prior art and which has been very successful both medically and commercially. The only reference which is even directed to the problem is the Andrews patent, and it shows an impractical construction with serious shortcomings. The decisions of *In re Lee*, 61 USPQ2d 1430 (CA FC 2002) and *McGinley v. Franklin Sports Inc.*, 60 USPQ2d 1001 (CA FC 2001), copies attached, show that rejections involving combinations of patents and which are lacking in specific teachings for combination are clearly unwarranted.

5. Rejections suggesting that claims should be limited to the preferred construction, despite disclosure in many places in the specification and drawings of embodiments other than the preferred embodiment.

6. Rejections calculated to preclude constructive amendments to the claims. On the one hand the claims are rejected as unpatentable over certain prior art references. Then when limitations are included in the claims which are not found in the prior art references, these limitations are subject to indefiniteness or other specious rejections, rather than accepting the limitations as patentably defining over the prior art.

It is also noted that several new references have been cited, including S.S. Ma U.S. Pat. No. 4,598,484, M. Kuhn U.S. Pat. No. 4,727,661, and P./a. Foldes U.S. Pat. No. 4,095,353. However, these patents all have spaced elements forming a number of high pressure points across the foot, instead of the substantially smooth continuous upper surface of the sectioned grid like construction as disclosed in the application and now included in the amended claims in the present application.

As developed in detail in the attached Supplemental Declaration of Tracy Grim, arrangements such as those shown in the three new patents would have extremely adverse consequences if used by a patient suffering from diabetic ulcers. The feet of diabetic patients tend to be swollen and very tender with thin fragile skin, and poor circulation. Instead of relieving the pressure at the ulcerated area of the foot, the constructions of the new references would further injure the foot and entirely prevent ulcer healing. Also, regarding the present invention, in the absence of ulcers, the resilient independent sections are very helpful in avoiding high pressure zones or points on the foot where ulcers might otherwise develop.

Now, following the foregoing general comments, the specific rejections to specific claims will be considered.

Rejection re Enablement

Claims 50 – 55 , 57 and 58 were rejected based on a supposed lack of enablement as these claims do not include the removability feature. In this connection, it is respectfully noted that the footgear of the present invention without removable sections could be prescribed for

diabetic patients with a tendency toward foot ulcers; and the claimed construction would avoid shear stresses on the foot and prevent ulcers.

Further, reference is made to column 3, lines 20 – 24 which refer to a “broad aspect of the invention” not including removability, as follows:

“In accordance with a broader aspect of the invention, footgear or footwear generally may be provided with an inner sole having mobile sections of the type described in the preceding paragraph.”

Please note specifically that there is no mention of removability of the sections in this quoted complete paragraph from the specification.

In addition, reference is also made to Column 13, lines 10 – 20 of the description, wherein the invention is discussed without reference to removability, as follows:

“It should be noted that the various embodiments of the present invention provide means to reduce shear forces on the sole of the foot. The grid pattern of resilient sections creates a multiplicity of sections that sway laterally independently of one another in response to forces applied by the foot. Typical soles simply resist lateral foot motion, thereby inducing shear stresses on the bottom of the foot which may cause or aggravate ulcers. Thus, in contrast to typical soles, the grid pattern of independently mobile resilient sections of the present invention constitutes means for reducing shear stresses on the bottom of a foot as the user walks along.”

The decision of *In re Mayhert*, cited by the Patent Office, has also been reviewed. In that case, it was found that the “cooling zone” was necessary in order for the method to be operative. However, in the present case, where the footgear may be used without removability as a preventive measure, the claimed product is clearly operative, effective, and within the purview of the specification, as confirmed by the above-quoted passages.

Claim 43 was rejected as indefinite, in the use of the term “surfaces”. This language has been revised to refer to upper footgear “parts”, which apparently is acceptable, see claim 42.

Claims 50 – 58 were rejected as indefinite in the use of the phrase “independently vertically movable resilient sections” on the alleged basis that “it is not clear what structural limitations applicant intends to encompass”. In this regard, it is respectfully noted that this

language is taken directly from pending claims of the parent application, see Col. 15, lines 26 – 28 of claim 19 for example. In addition, the term “resilient” facilitates the “vertically movable” limitation. It is also noted that the sections are further defined in the claims. For example, in claim 50 the sections are defined as “being directly adjacent one another to form a grid”; the upper surface of the sections are defined as being of “soft resilient material”; and the sections are further defined as “a multiplicity of sections that sway laterally independently of one another...”. Similar limitations are included in claims 57 and 58. It is respectfully suggested that these various limitations appropriately define the nature of the sections in the terms of the specification, and should be considered to fully comply with 35USC 112 as “distinctly claiming” the invention.

Attention is also directed to the very recent decision of *Oakley, Inc. v. Sunglass Hat International*, 65 USPQ 2d 1321 (2003), copy attached. In this case it was argued that the phrase “vivid colored appearance” was indefinite; and this argument was rejected by the Court of Appeals for the Federal Circuit. In its decision the Court stated that “a patentee may be his or her own lexicographer” and that “a patentee need not define his or her invention with mathematical precision”, see 65 USPQ 2d at p. 1326. Similarly, in the present case applicants define their invention in terms of the swaying of the sections to accommodate shear forces, and also including other limitations relative to the sections. It is respectfully submitted that the claim language under consideration are not indefinite, in accordance with the guidelines of the CA, FC, as quoted hereinabove from the Oakley decision.

Prior Art Rejections

Claims 50 – 52, 54, 57 and 58 were rejected on the Kuhn or the Foldes patents; and claims 42 – 45, 47 – 52 and 54 – 58 were rejected as anticipated by the Ma patent.

As set forth in detail in the attached Supplemental Declaration of Tracy Grim, these references with the multiple discrete, spaced pressure points, are entirely foreign to the present invention and would be severely damaging to the feet of patients such as diabetic patients having tender feet; paper thin skin on their feet, and poor circulation.

To more clearly distinguish from these references, the independent claims under consideration all now have been amended to include the limitation that the upper surfaces of the sections together form a substantially smooth and continuous surface.

Of course, the structures of the Kuhn, Ma, and Foldes references are for an entirely different purpose, i.e., stimulating the feet of fully healthy vigorous persons, while the present invention involves patients such as diabetic patients or other with special problems such as poor foot circulation, foot ulcers, paper thin skin and the like.

Claim 53 was rejected as unpatentable over either the Kuhn patent, the Foldes patent or the Ma patent.

Claim 53 is a dependent claim, now amended to be dependent on independent claim 67, specifying that the sections are hexagonal in cross-section. This claim was rejected with claim 50 based on the Kuhn, Foldes or Ma patents, along with the statement "the exact shape of the resilient sections is considered to be a choice of design ...". However, it is respectfully noted that the hexagonal shape is particularly advantageous for the present purposes, see Fig. 2 of the parent application. Thus, with a hexagonal configuration the relieved areas may closely approach the rounded configuration of the usual foot ulcers. Incidentally, relative to the Kuhn Foldes and Ma patents, claim 67 includes the limitation to a "substantially smooth and continuous surface", not found in these references.

Claim 46 was rejected as unpatentable over the Ma patent in view of the Kuhn patent. Claim 46 is dependent upon independent claim 45. Claim 45 now includes the limitation that the upper surface of the inner sole have sections which together form a "substantially smooth and continuous upper surface". As discussed in detail in the Supplemental Declaration of Tracy Grim, the localized high stress contact points of both Ma and Kuhn would spell disaster for patients such as diabetic patients with foot ulcers, poor circulation, thin or fragile skin or the like. It is further noted that claim 46 brings in the matter of removability of the sections, not shown by Ma or Kuhn. Accordingly, claim 45 and dependent claim 46 are clearly patentable.

Claims 33 – 38 and 47 were rejected as unpatentable over the Kellerman patent in view of the Andrews patent and the Moronaga patent.

First, in considering the Kellerman patent, note in the "Summary of the Invention" section of the Kellerman patent starting at Col. 2, line 24, that Kellerman repeatedly stresses the desirability of a "low coefficient of friction". Specifically, this is included at lines 26, 34, 47, 54,

and 60, for examples. Note that Kellerman also states that the material should be "quite hard" (Col. 2, line 54). In order to achieve this low friction sliding action Kellerman uses high density polyethylene (HDPE) which is quite hard.

It is further noted that Kellerman's construction is intended for use with callouses, bunions, heel spurs and the like (Col. 1, lines 16, 17), and not with the ulcers with which the present invention is primarily concerned.

Accordingly, the Kellerman construction is directed to a different problem and uses a different construction.

It is further noted, as set forth in a prior Declaration of Tracy Grim, that the hard surface of Kellerman would be damaging to and prevent the healing of ulcers.

In the rejection, it is suggested that the Kellerman pad be turned up-side-down, supposedly as suggested by Andrews.

It is respectfully suggested, however, that this rejection is actually using applicant's patent application as a road-map to combine the references.

The Andrews construction includes thin flat cloth covered removable inserts, and mating depressions from which some of these inserts may be removed. One logical combination of Andrews and Kellerman would be to provide the bottom of the Kellerman pads with inserts and depressions from which the inserts may be removed. Another possible logical combination would be to provide removable inserts on the bottom of the Andrews pad. Still another logical modification of Kellerman by Andrews, would be to have the slippery Kellerman top surface provided with recesses or depressions, with inserts fitting into these depressions. A further logical combination of Kellerman and Andrews, would involve using the slippery top layer of Kellerman in place of the cloth top layer of Andrews. Of course either of these last two alternatives would result in sliding of the feet into engagement with the hard or rigid upper surface of the insole, with severe injurious results to any patient of the type under consideration.

Accordingly, it is only through the teachings provided by applicant, that the proposed combination of references as set forth in the rejection, could be made.

It is also noted in passing that the broadening statement of Andrews referenced in the rejections at lines 10 – 13 of Column 2 of Andrews, relates to the provisions of additional depressions, not inserts; and therefore Andrews would always have walls surrounding the inserts, and not an array of only inserts as suggested in the Office Action.

Accordingly it is clear that it is only through “Hindsight” that the proposed combination of references would be achieved.

With regard to the use of “hindsight”, or the use of the applicant’s teachings to combine prior art, the courts have universally condemned such specious combinations and have upheld the validity of patents or claims of patents in which such hindsight was employed to combine the references. Notable among the decisions relating to the subject matter is the decision of the Supreme Court of the United States in the case of Diamond Rubber Co. of New York v. Consolidated Rubber Tire Co., 220 U.S. 428, 31 S. Ct. 444 (1911). In this case the Supreme Court stated “Many things, and the patent law abounds in illustrations, seem obvious after they have been done, and ‘in the light of the accomplished result,’ it is often a matter of wonder how they so long ‘eluded the search of the discoverer and set at defiance the speculations of inventive genius’ . . . Knowledge after the event is always easy, and problems once solved present no difficulties, indeed may be represented as never having had any . . .” *Id.* at 434-35, 31 S. Ct. at 447. The Supreme Court then went on to uphold the patent under consideration.

In a similar vein, the Court of Customs and Patent Appeals stated in the case of In re Kamm and Young, 172 U.S.P.Q. 298 (C.C.P.A. 1972), that the basic mandate inherent in 35 U.S.C. § 103 is that piecemeal reconstruction of prior art patents in the light of applicant’s disclosure shall not be basis for holding of obviousness. Similarly, in the case of Ex Parte Lange, 72 U.S.P.Q. 90, 91 (C.C.P.A. 1947), the Court said, “It seems to use that the Examiner is using appellant’s disclosure for the suggestion of the combination since there is no suggestion in any of the patents for their combination in the manner claimed by applicant. The cases of Ex Parte Myerson, 72 U.S.P.Q. 49 (C.C.P.A. 1946), and Ex Parte Gary, 76 U.S.P.Q. 224 (C.C.P.A. 1947), are to the same effect. Two other cases decided by the C.C.P.A. in which hindsight was condemned are In re Stephens, Wenzel, and Browne. 145 U.S.P.Q. 656 (C.C.P.A. 1965), and In re Leonor, 158 U.S.P.Q. 20 (C.C.P.A. 1968). In the Stephens case, the Court stated that “References may not be combined indiscriminately and with guidance from applicant’s disclosure to show that claims are unpatentable.” 145 U.S.P.Q. at 657. In the Leonor case, the court dismissed the examiner’s rejection of the claims in suit as “hindsight reconstruction of prior art” and disapproved of the board’s affirmance of that rejection on the basis that it “violates [the] intent and spirit of 35 U.S.C. § 103.” 20 U.S.P.Q. at 20-21. In Leonor, the court said that the issue is “whether teachings of prior art would of themselves, and without benefit of

applicant's disclosure, suggest [a process] which would make claimed invention obvious..." (emphasis court's). Id. at 21.

The Court of Appeals for the Federal Circuit has been equally strong in its condemnation of "hindsight" or similar rejections. Thus, for example, in ACS Hospital Systems, Inc. v. Montefiore Hospital, 221 U.S.P.Q. 929 (Fed. Cir. 1984), the Federal Circuit reversed a holding of invalidity because there was no teaching to combine the references. Similarly, the Federal Circuit, in W.L. Gore Associates, Inc. v. Garlock, Inc., 220 U.S.P.Q. 303, 313 (Fed. Cir. 1983), referenced the "insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher, " and condemned this type of rejection or holding of unpatentability. Other more recent CAFC decisions to the same effect include In re Lee, and McGinley v. Franklin Sports, Inc., copies of which were provided with a prior amendment in this application.

In addition to the Andrews and Kellerman patents, a number of claims including claims 33 – 38 and 47 were rejected on these two patents, further in view of the Moronago patent. While the Moranaga sole does have three different resilient layers at the rear thereof, it includes no teaching that it could be used for constructions having the sole cut into many small sections. Thus, Moranaga only shows three layers at the rear, not throughout the construction, and has an upper very thin layer extending over the entire surface of the insole. Further, it might well be considered that the cutting or sectioning of a pad having three different materials might not be practical, as cutting even a single resilient material with a blade is difficult because of the tendency of the resilient material to flex rather than cut. Where cutting a single layer of resilient material is difficult, the possibility of cutting three different resilient materials might well be considered impractical, before the teachings of the present invention.

Turning to another aspect of the rejection, where references teach away from invention they cannot serve as a predicate for unobviousness, see McGinley v. Franklin Sports, Inc., 60 USPQ 2d 1001 at p. 1010, and cases cited therein.

With regard to the Kellerman and the Andrews patents, it is considered that they both actually teach away from the invention. Thus, Kellerman stresses, over and over again, the desirability having a slippery, or very low coefficient of friction upper surface for his inner sole, so that the user's foot will slide on the sole as he walks. On the other hand applicants have small

inserts of a substantial height, so that they sway to absorb shear forces, without the sliding action of Kellerman which would prevent the healing of fragile ulcers.

Accordingly, in the present case, the references teach away from their combination, and include no suggestions toward their combination as proposed in the Office Action. In this regard, there are many decisions of the Court of Appeals for the Federal Circuit requiring explicit teaching for combining references; and we have previously enclosed a copy of the recent typical decision, McGinley vs. Franklin Sports, Inc., 60 USPQ 2d 1001, in which the Court indicated that when the combination of references teaches away from the invention, the rejection based on a combination of references is improper.

It is further noted that each of the claims in this group include the following limitation:

“said grid pattern of resilient sections constituting a multiplicity of sections that sway laterally independently of one another in response to forces applied by the foot, thereby reducing shear stresses on the bottom of a foot as the user walks along”.

This passage corresponds to the patent specification, Col. 13, lines 13 – 15.

This swaying action to relieve shear stress is clearly not present in any of the three patents, and represents another distinguishing feature. With regard to weight to be given to this type of limitation, reference is made to the U.S. Supreme Court decision in Eibel Process Co. v. Minnesota and Ontario Paper Co., 261 U.S. 45 (1922) where broad terms such as “substantially” and “high” relative to structural features were accepted and given appropriate weight, as the patent was upheld.

Claims 39, 42 and 43 were rejected as “unpatentable over Grim in view of Kellerman and Andrews.” In considering this rejection, although the Grim patent does disclose the flaps and the heel/ankle portion, there is no teaching in the patent to suggest the desirability of combining with the Andrews and Kellerman references.

It is also noted that claim 39 (as well as a number of other claims) specifies that the sections have a height which is at least equal to the width thereof. Of course the flat elements of Andrews and Kellerman do not respond to this limitation.

Further, all three of these claims include the above quoted limitation regarding the fact that the sections sway laterally to relieve shear stress.

These limitations provide the advantage of permitting the swaying action which absorbs shear, without interfering with ulcer healing in the relieved areas. No such construction is shown or suggested by Andrews or Kellerman where the removable pieces are thin and flat.

Concerning one more factor about the Andrews patent, the basic disclosed structure of Andrews is a series of five (5) discrete spaced removable inserts extending into depressions. As a broadening statement Andrews states that “the number shape and position of the depressions may be chosen as best suited to the needs of most users”. However, where Andrews would still have depressions, then there would still be walls or full height structure around these depressions. This still does not suggest a full array of removable sections with the sections being directly adjacent one another as claimed.

While Kellerman, which is “labeled” the basic reference, has removable bottom inserts, the main thrust of Kellerman is to provide a slippery stiff upper layer to permit sliding of the feet within the shoes. There is no teaching that would suggest turning the Kellerman structure upside down, except that of applicants.

And the recent decisions of the Court of Appeals for the Federal Circuit have indicated that for a valid combination of references there must be an explanation of the reasons why one of ordinary skill in the art would have been motivated to select references and to combine them. See In re Lee, 61 USPQ2d 1430 (CA FC, 2002), copy attached, and McGinley v. Franklin Sports, Inc., 60 USPQ2d 1001 (CA FC 2001), copy attached.

Here, where there is no teaching for the combinations other than applicant’s disclosure, there is no valid combination or justifiable rejection.

Dependent claim 40 was rejected on the same basis as parent claim 39 further in view of the Cavanaugh patent. Claim 39 should clearly be considered allowable for the reasons set forth above, and the additional limitations added by claim 40 cooperate to enhance the allowable subject matter of claim 39.

Dependent claim 41 was rejected as unpatentable on the same basis as parent claim 39, further in view of the Moronaga patent. Dependent claim 41 should be considered allowable along with claim 39, where claim 39 should clearly be allowable for the reasons set forth above. In addition, the softness of the upper layer of the sections (not found in Moronaga) cooperate with the section array configuration so that the individual sections remain in contact with specific

areas of the foot, and the sections sway to absorb and diffuse shear forces, rather than resisting the shear forces, as in the case of Moronaga and the other references.

Claims 42 – 45 were rejected as unpatentable over Kellerman in view of Andrews. The deficiencies of this proposed combination have been discussed hereinabove. Essentially, you would have to turn the Kellerman patent upside down, and ignore the lack of teachings in either reference, to justify the combination. It is also noted that the above quoted limitation relating to swaying is included in all of these claims and is not found in either of the references which show flat inserts. It is further noted that claim 45 has been amended to indicate that the swaying is to “a substantial extent” thus further distinguishing from the references.

It is also noted that the latest Office Action on page 9 thereof includes the statement that “even though the sections may be relatively thin, they would still sway to some possibly very small degree”. First, it is not clear what prior art is being referenced, presumably Andrews or Kellerman. The language of the claims requires that the resilient swaying sections extend upward toward the foot, with the upper ends of the sections staying in engagement with the foot (or a sock) so that swaying occurs. Kellerman stresses over and over that his shoe involves sliding of the foot on the upper surface of the insole, see the first words of the Abstract and the second line of the Summary of Invention, and col. 2, lines 60 and 61, for examples. Accordingly the swaying motion defined in the claims is entirely foreign to the entire thrust of the Kellerman invention. Regarding Andrews, his inserts are “entirely bounded” by the walls of the layer 11 (see col. 2, line 16); and these sections therefore can have no significant swaying action.

Regarding the rejection of dependent claim 46, it should be considered allowable along with its parent claim 45 for the reasons set forth above relative to claim 45, as it provides further enhancement to this combination.

With regard to the specific claim amendments being made by this amendment, all of the rejected claims and the newly presented claims include the quoted limitation discussed hereinabove, involving the upper surface of the sections forming a “substantially smooth and continuous surface”. Claim 45 also includes the limitation relating to the swaying being “to a substantial extent”. This is the type of limitation approved by the U.S. Supreme Court in the Eibel case, discussed and cited hereinabove.

With regard to new claims 59 through 65 they are dependent claims which specify that the height of the sections is “substantially equal to or greater than said transverse extent”. This

limitation is of course not found in the Andrews or Kellerman patent, and contributes to the swaying action which reduces shear forces.

The New Claims

The additional new claims are similar to claims previously presented and are considered patentable for the reasons set forth above. New claims 67 and 68 also explicitly includes the limitations that the sections have a height substantially equal to or greater than the transverse extent. Of course this limitation is not found in Andrews or Kellerman.

Concerning the limitation that the height of the sections is substantially equal to or greater than the lateral extent of the sections, as set forth in newly presented dependent claims 59 – 66, and other claims, reference is made to the passage on Column 13, lines 35 and 36 of the parent patent, in which a “preferred embodiment” is mentioned, and to Col. 13, lines 32 and 33 wherein it is stated that “larger or smaller removable sections may be employed. Reference is also made to the drawings such as Figs. 2, 3, 6, 8, 10, 14, 16, 24, 25 and 26 wherein this limitation is supported, with some of the drawing figures such as Fig. 6 showing the sections of slightly less height than their lateral extent.

Dependent claim 69 specifies that the sections are in contact with one another; and this is another limitation not found in the references.

Claims 70 and 71 are new claims similar to claim 45 discussed hereinabove, but include “means” language as authorized by 35 USC 112, last paragraph, relative to swaying to a substantial extent. In addition, claim 71 includes the limitation that the sections are “of substantial height”. This is the type of language authorized by 35 USC 112, last paragraph, and also by the U.S. Supreme Court in cases such as the Eibel case cited hereinabove.

Attention is also directed to the Declaration of Kelly S. Long relating to the commercial success of the present product. As indicated in the Declaration orthopaedic products within the scope of the present patent application, and having a value of over \$8,600,000.00 were sold by Royce Medical Company over a recent 5 ½ year period. It is believed that the products as claimed in this application fulfill a long felt need in avoiding and overcoming serious foot problems for diabetic patients, or patients with similar problems; and this is confirmed by the excellent sales of these products.

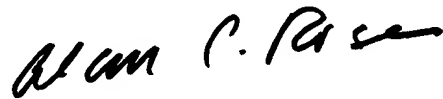
It is also noted that applicant's attorney would be pleased to discuss the claims with the Examiner, at the convenience of the Examiner if this would be considered useful in moving this application toward issue. Thank you.

The Commissioner is hereby authorized to charge any additional filing fees under 37 C.F.R. § 1.16, or application processing fees under 37 C.F.R. § 1.17, which may be required now or during the pendency of this application, or credit any overpayment to Account No. 16-2230. A duplicate copy of this sheet is enclosed.

In closing we wish to thank Examiner Patterson for the interviews which were courteously granted, and for the thorough consideration she has given this application.

In view of the foregoing points and authorities, an early Notice of Allowance is solicited.

Respectfully submitted,



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Enclosures:

- (1) Supplemental Declaration of Tracy Grim
- (2) Declaration of Kelly Long
- (3) Copy of Decision
Oakley, Inc. v. Sunglass Hat International, 65 USPQ 2d 1321
- (4) "A Poor Man's Tale of a Patent" by Charles Dickens

ADDENDUM PAGES42. Footgear with pressure relief areas for the foot, comprising:an outer sole;an inner sole mounted in said footgear above said outer sole, said inner sole having a plurality of independently vertically movable resilient sections arranged in a grid pattern, said independently vertically movable sections having lower surfaces which are separately removably mounted within said footgear and said sections having upper surfaces which together form [an] a substantially smooth and continuous upper surface for engagement by the foot;said resilient sections being directly adjacent one another to form said grid; andsaid grid of resilient sections extending over substantially all of said inner sole;said grid pattern of resilient sections constituting a multiplicity of sections that sway laterally independently of one another in response to forces applied by the foot, thereby reducing shear stresses on the bottom of a foot as the user walks along;said footgear having a closed heel/ankle portion;said footgear including upper footgear parts for holding the foot into the footgear, said upper footgear parts extending over at least a portion of the upper surface of the foot from both sides of the foot; andsaid upper surface of said resilient sections being directly exposed for direct engagement with the foot of the user or a sock or stocking on the foot of the user.43. Footgear with pressure relief areas for the foot, comprising:an outer sole;an inner sole mounted in said footgear above said outer sole, said inner sole having a plurality of independently vertically movable resilient sections arranged in a grid pattern, said independently vertically movable sections having lower surfaces which are separately removably mounted within said footgear, and said sections having upper surfaces which together form [an] a substantially smooth and continuous upper surface for engagement by the foot;said resilient sections being directly adjacent one another to form said grid; andsaid grid of resilient sections extending over substantially all of said inner sole;said footgear having a closed heel/ankle portion;

said footgear including upper footgear [surfaces] parts for holding the foot into the footgear, said upper footgear [surfaces] parts extending over at least a portion of the upper surface of the foot [from both sides of the foot];

arrangements for [holding] engaging said upper footgear [surfaces] parts [together] to hold the user's foot into the footgear;

said upper surface of said resilient sections being directly exposed for direct engagement with the foot of the user or a sock or stocking on the foot of the user; and

said grid pattern of resilient sections constituting a multiplicity of sections that sway laterally independently of one another in response to forces applied by the foot, thereby reducing shear stresses on the bottom of a foot as the user walks along.

44. Footgear with pressure relief areas for the foot, comprising:

an outer sole;

an inner sole mounted in said footgear above said outer sole, said inner sole having a plurality of independently vertically movable resilient sections arranged in a grid pattern, said independently vertically movable sections having lower surfaces which are separately removably mounted within said footgear, and said sections having upper surfaces which together form [an] a substantially smooth and continuous upper surface for engagement by the foot;

said resilient sections being directly adjacent one another to form said grid; and

said grid of resilient sections extending over substantially all of said inner sole;

said footgear having a closed heel/ankle portion;

said grid pattern of resilient sections constituting a multiplicity of sections that sway laterally independently of one another in response to forces applied by the foot, thereby reducing shear stresses on the bottom of a foot as the user walks along; and

said upper surface of said sections being directly exposed for direct engagement with the foot of the user or a sock or stocking on the foot of the user.

45. Footgear with pressure relief areas for the foot, comprising:

an outer sole;

an inner sole mounted in said footgear above said outer sole, said inner sole having a plurality of independently vertically movable resilient sections arranged in a grid pattern, said independently vertically movable sections having lower surfaces which are separately

removably, mounted within said footgear and said sections having upper surfaces which together form [an] a substantially smooth and continuous upper surface for engagement by the foot;

said resilient sections being directly adjacent one another to form said grid; and

said grid of resilient sections extending over substantially all of said inner sole;

said upper surface of said sections being directly exposed for direct engagement with the foot of the user or a sock or stocking on the foot of the user; and

said grid pattern of resilient sections constituting a multiplicity of sections that sway laterally to a substantial extent independently of one another in response to forces applied by the foot, thereby reducing shear stresses on the bottom of a foot as the user walks along.

50. Orthopaedic footgear with resilient support for the foot, comprising:

an outer sole;

an inner sole mounted in said footgear above said outer sole, said inner sole having a plurality of independently vertically movable resilient sections arranged in a grid pattern, said independently vertically movable sections having upper surfaces which together form [an] a substantially smooth and continuous upper surface for engagement by the foot;

said resilient sections being directly adjacent one another to form said grid;

said upper surface of said sections being of soft resilient material and being directly exposed for direct engagement with the foot of the user or a sock or stocking on the foot of the user; and

said grid pattern of resilient sections constituting a multiplicity of sections that sway laterally independently of one another in response to forces applied by the foot, thereby reducing shear stresses on the bottom of a foot as the user walks along.

53. Orthopaedic footgear as defined in claim [50] 67 wherein said sections are hexagonal in cross section.

57. Orthopaedic footgear with resilient support for the foot, comprising:

an outer sole;

an inner sole mounted in said footgear above said outer sole, said inner sole having a plurality of independently vertically movable resilient sections arranged in a grid pattern, said independently vertically movable sections having upper surfaces which together form [an] a substantially smooth and continuous upper surface for engagement by the foot;

said resilient sections being directly adjacent one another to form said grid;

said upper surface of said sections being of soft resilient material and being directly exposed for direct engagement with the foot of the user or a sock or stocking on the foot of the user;

said grid pattern of resilient sections constituting a multiplicity of sections that sway laterally independently of one another in response to forces applied by the foot, thereby reducing shear stresses on the bottom of a foot as the user walks along; and

said sections having a height and a transverse extent, with the height being greater than said transverse extent.

58. Orthopaedic footgear with resilient support for the foot, comprising:

an outer sole;

an inner sole mounted in said footgear above said outer sole, said inner sole having a plurality of independently vertically movable resilient sections arranged in a grid pattern, said independently vertically movable sections having upper surfaces which together form [an] a substantially smooth and continuous upper surface for engagement by the foot;

said resilient sections being directly adjacent one another to form said grid;

said upper surface of said sections being of soft resilient material and being directly exposed for direct engagement with the foot of the user or a sock or stocking on the foot of the user;

said grid pattern of resilient sections constituting a multiplicity of sections that sway laterally independently of one another in response to forces applied by the foot, thereby reducing shear stresses on the bottom of a foot as the user walks along; and

said sections having a height and a transverse extent, with the height being substantially equal to or greater than said transverse extent.

Please add the following claims:

59. Orthopaedic footgear as defined in claim 33 wherein said sections have a height and a transverse extent, with the height being substantially equal to or greater than said transverse extent.

60. Orthopaedic footgear as defined in claim 36 wherein said sections have a height and a transverse extent, with the height being substantially equal to or greater than said transverse extent.

61. Orthopaedic footgear as defined in claim 37 wherein said sections have a height and a transverse extent, with the height being substantially equal to or greater than said transverse extent.

62. Orthopaedic footgear as defined in claim 38 wherein said sections have a height and a transverse extent, with the height being substantially equal to or greater than said transverse extent.

63. Orthopaedic footgear as defined in claim 39 wherein said sections have a height and a transverse extent, with the height being substantially equal to or greater than said transverse extent.

64. Orthopaedic footgear as defined in claim 42 wherein said sections have a height and a transverse extent, with the height being substantially equal to or greater than said transverse extent.

65. Orthopaedic footgear as defined in claim 43 wherein said sections have a height and a transverse extent, with the height being substantially equal to or greater than said transverse extent.

66. Orthopaedic footgear as defined in claim 44 wherein said sections have a height and a transverse extent, with the height being substantially equal to or greater than said transverse extent.

67. Footgear with pressure relief areas for the foot, comprising:
an outer sole;

an inner sole mounted in said footgear above said outer sole, said inner sole having a plurality of independently vertically movable resilient sections arranged in a grid pattern, said independently vertically movable sections having lower surfaces which are separately

removably, mounted within said footgear and said sections having upper surfaces which together form a substantially smooth and continuous upper surface for engagement by the foot;

said resilient sections being directly adjacent one another to form said grid; and

said grid of resilient sections extending over substantially all of said inner sole;

said upper surface of said sections being directly exposed for direct engagement with the foot of the user or a sock or stocking on the foot of the user; and

said sections having a height and a transverse extent, with the height being substantially equal to or greater than said transverse extent; and

said grid pattern of resilient sections constituting a multiplicity of sections that sway laterally independently of one another in response to forces applied by the foot, thereby reducing shear stresses on the bottom of a foot as the user walks along.

68. Orthopaedic footgear with resilient support for the foot, comprising:

an outer sole;

an inner sole mounted in said footgear above said outer sole, said inner sole having a plurality of independently vertically movable, individual removable resilient sections arranged in a grid pattern, said independently vertically movable sections having upper surfaces which together form a substantially smooth and continuous upper surface for engagement by the foot;

said resilient sections being directly adjacent one another to form said grid;

said upper surface of said sections being of soft resilient material and being directly exposed for direct engagement with the foot of the user or a sock or stocking on the foot of the user; and

said sections having a height and a transverse extent, with the height being substantially equal to or greater than said transverse extent; and

said grid pattern of resilient sections constituting a multiplicity of sections that sway laterally independently of one another in response to forces applied by the foot, thereby reducing shear stresses on the bottom of a foot as the user walks along.

69. An orthopaedic footgear as defined in claim 68 wherein the sections are in contact with one-another.

70. Footgear with pressure relief areas for the foot, comprising:

an outer sole;

an inner sole mounted in said footgear above said outer sole, said inner sole having a plurality of independently vertically movable resilient sections arranged in a grid pattern, said independently vertically movable sections having lower surfaces which are separately removably, mounted within said footgear and said sections having upper surfaces which together form a substantially smooth and continuous upper surface for engagement by the foot;

said resilient sections being directly adjacent one another to form said grid; and

said grid of resilient sections extending over substantially all of said inner sole;

said upper surface of said sections being directly exposed for direct engagement with the foot of the user or a sock or stocking on the foot of the user; and

said grid pattern of resilient sections constituting means for providing a multiplicity of sections that sway laterally to a substantial extent independently of one another to a substantial extent in response to forces applied by the foot, for reducing shear stresses on the bottom of a foot as the user walks along.

71. Footgear with pressure relief areas for the foot, comprising:

an outer sole;

an inner sole mounted in said footgear above said outer sole, said inner sole having a plurality of independently vertically movable resilient sections arranged in a grid pattern, said independently vertically movable sections having lower surfaces which are separately removably, mounted within said footgear and said sections having upper surfaces which together form a substantially smooth and continuous upper surface for engagement by the foot;

said resilient sections being directly adjacent one another to form said grid; and

said grid of resilient sections extending over substantially all of said inner sole;

said upper surface of said sections being directly exposed for direct engagement with the foot of the user or a sock or stocking on the foot of the user; and

said grid pattern of resilient sections constituting means for providing a multiplicity of sections of substantial height that sway laterally to a substantial extent independently of one another to a substantial extent in response to forces applied by the foot, for reducing shear stresses on the bottom of a foot as the user walks along.

BY CHARLES DICKENS

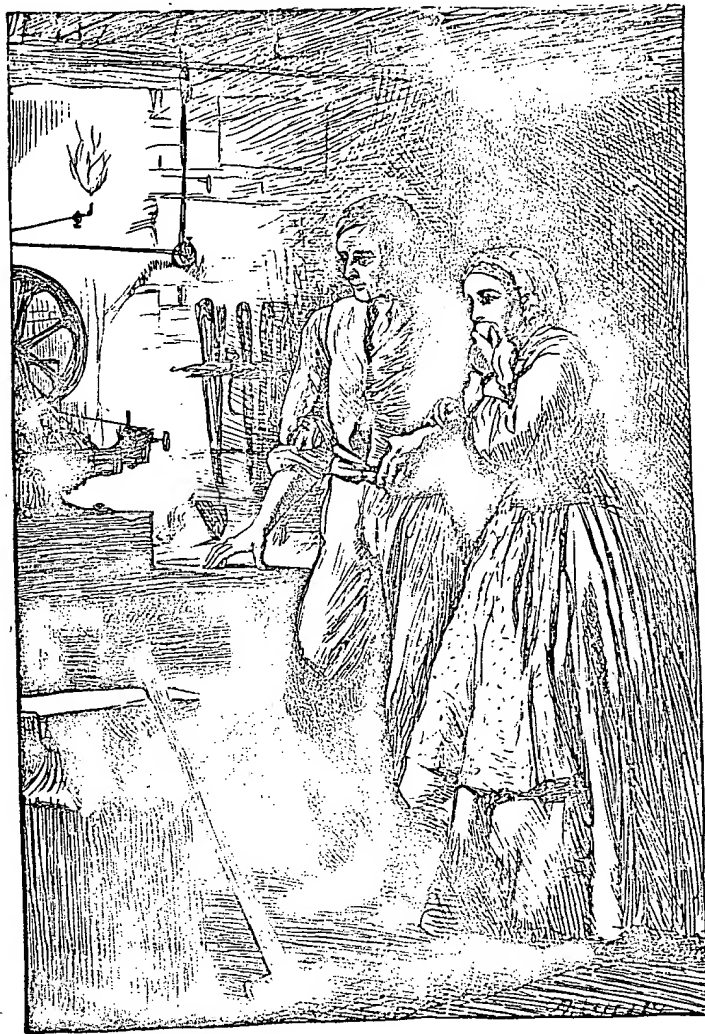
A POOR MAN'S TALE OF A PATENT.

I AM not used to writing for print. What working-man, that never labours less (some Mondays, and Christmas Time and Easter Time excepted) than twelve or fourteen hours a day, is? But I have been asked to put down, plain, what I have got to say; and so I take pen-and-ink, and do it to the best of my power, hoping defects will find excuse.

I was born nigh London, but have worked in a shop at Birmingham (what you would call Manufactories, we call Shops), almost ever since I was out of my time. I served my apprenticeship at Deptford, nigh where I was born, and I am a smith by trade. My name is John. I have been called "Old John" ever since I was nineteen year of age, on account of not having much hair. I am fifty-six year of age at the present time, and I don't find myself with more hair, nor yet with less, to signify, than at nineteen year of age aforesaid.

I have been married five and thirty year, come next April. I was married on All Fools' Day. Let them laugh that win. I won a good wife that day, and it was as sensible a day to me as ever I had.

We have had a matter of ten children, six whereof are living. My eldest son is engineer in the Italian steam-packet "Mezzo Giorno, plying between Marseilles and Naples, and calling at Genoa, Leghorn, and Civita Vecchia." He



A Poor Man's Tale of a Patent.

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was a good workman. He invented a many useful little things that brought him in—nothing. I have two sons doing well at Sydney, New South Wales—single, when last heard from. One of my sons (James) went wild and for a soldier, where he was shot in India, living six weeks in hospital with a musket-ball lodged in his shoulder-blade, which he wrote with his own hand. He was the best looking. One of my two daughters (Mary) is comfortable in her circumstances, but water on the chest. The other (Charlotte), her husband run away from her in the basest manner, and she and her three children live with us. The youngest, six year old, has a turn for mechanics.

I am not a Chartist, and I never was. I don't mean to say but what I see a good many public points to complain of, still I don't think that's the way to set them right. If I did think so, I should be a Chartist. But I don't think so, and I am not a Chartist. I read the paper, and hear discussion, at what we call "a parlour," in Birmingham, and I know many good men and workmen who are Chartists. Note. Not Physical force.

It won't be took as boastful in me, if I make the remark (for I can't put down what I have got to say, without putting that down before going any further), that I have always been of an ingenious turn. I once got twenty pound by a screw, and it's in use now. I have been twenty year, off and on, completing an Invention and perfecting it. I perfected of it, last Christmas Eve at ten o'clock at night. Me and my wife stood and let some tears fall over the Model, when it was done and I brought her in to take a look at it.

A friend of mine, by the name of William Butcher, is a Chartist. Moderate. He is a good speaker. He is very animated. I have often heard him deliver that what is, at every turn, in the way of us working-men, is, that too many places have been made, in the course of time, to provide for people that never ought to have been provided for; and that we have to obey forms and to pay fees to support those

places when we shouldn't ought. "True," (delivers William Butcher), "all the public has to do this, but it falls heaviest on the working-man, because he has least to spare; and likewise because impediments shouldn't be put in his way, when he wants redress of wrong or furtherance of right." Note. I have wrote down those words from William Butcher's own mouth. W. B. delivering them fresh for the aforesaid purpose.

Now, to my Model again. There it was, perfected of, on Christmas Eve, gone nigh a year, at ten o'clock at night. All the money I could spare I had laid out upon the Model; and when times was bad, or my daughter Charlotte's children sickly, or both, it had stood still, months at a spell. I had pulled it to pieces, and made it over again with improvements, I don't know how often. There it stood, at last, a perfected Model as aforesaid.

William Butcher and me had a long talk, Christmas Day, respecting of the Model. William is very sensible. But sometimes cranky. William said, "What will you do with it, John?" I said, "Patent it." William said, "How patent it, John?" I said, "By taking out a Patent." William then delivered that the law of Patent was a cruel wrong. William said, "John, if you make your invention public, before you get a Patent, any one may rob you of the fruits of your hard work. You are put in a cleft stick, John. Either you must drive a bargain very much against yourself, by getting a party to come forward beforehand with the great expenses of the Patent; or, you must be put about, from post to pillar, among so many parties, trying to make a better bargain for yourself, and showing your invention, that your invention will be took from you over your head." I said, "William Butcher, are you cranky? You are sometimes cranky." William said, "No, John, I tell you the truth;" which he then delivered more at length. I said to W. B. I would Patent the invention myself.

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wife unfortunately took to drinking, made away with everything, and seventeen times committed to Birmingham Jail before happy release in every point of view), left my wife, his sister, when he died, a legacy of one hundred and twenty-eight pound ten, Bank of England Stocks. Me and my wife never broke into that money yet. Note. We might come to be old and past our work. We now agreed to Patent the invention. We said we would make a hole in it—I mean in the aforesaid money—and Patent the invention. William Butcher wrote me a letter to Thomas Joy, in London. T. J. is a carpenter, six foot four in height, and plays quoits well. He lives in Chelsea, London, by the church. I got leave from the shop, to be took on again when I come back. I am a good workman. Not a Teetotaller; but never drunk. When the Christmas holidays were over, I went up to London by the Parliamentary Train, and hired a lodging for a week with Thomas Joy. He is married. He has one son gone to sea.

Thomas Joy delivered (from a book he had) that the first step to be took, in Patenting the invention, was to prepare a petition unto Queen Victoria. William Butcher had delivered similar, and drawn it up. Note. William is a ready writer. A declaration before a Master in Chancery was to be added to it. That, we likewise drew up. After a deal of trouble I found out a Master, in Southampton Buildings, Chancery Lane, nigh Temple Bar, where I made the declaration, and paid eighteen-pence. I was told to take the declaration and petition to the Home Office, in Whitehall, where I left it to be signed by the Home Secretary (after I had found the office out), and where I paid two pound, two, and sixpence. In six days he signed it, and I was told to take it to the Attorney-General's chambers, and leave it there for a report. I did so, and paid four pound, four. Note. Nobody all through, ever thankful for their money, but all uncivil.

My lodging at Thomas Joy's was now hired for another week, whereof five days were gone. The Attorney-General

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A COSTLY PILGRIMAGE.

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made what they called a Report-of-course (my invention being, as William Butcher had delivered before starting, unopposed), and I was sent back with it to the Home Office. They made a Copy of it, which was called a Warrant. For this warrant, I paid seven pound, thirteen, and six. It was sent to the Queen, to sign. The Queen sent it back, signed. The Home Secretary signed it again. The gentleman throwed it at me when I called, and said, "Now take it to the Patent Office in Lincoln's Inn." I was then in my third week at Thomas Joy's living very sparing, on account of fees. I found myself losing heart.

At the Patent Office in Lincoln's Inn, they made "a draft of the Queen's bill," of my invention, and a "docket of the bill." I paid five pound, ten, and six, for this. They "engrossed two copies of the bill; one for the Signet Office, and one for the Privy-Seal Office." I paid one pound, seven, and six, for this. Stamp duty over and above, three pound. The Engrossing Clerk of the same office engrossed the Queen's bill for signature. I paid him one pound, one. Stamp-duty, again, one pound, ten. I was next to take the Queen's bill to the Attorney-General again, and get it signed again. I took it, and paid five pound more. I fetched it away, and took it to the Home Secretary again. He sent it to the Queen again. She signed it again. I paid seven pound, thirteen, and six, more, for this. I had been over a month at Thomas Joy's. I was quite wore out, patience and pocket.

Thomas Joy delivered all this, as it went on, to William Butcher. William Butcher delivered it again to three Birmingham Parlours, from which it got to all the other Parlours, and was took, as I have been told since, right through all the shops in the North of England. Note. William Butcher delivered, at his Parlour, in a speech, that it was a Patent way of making Chartists.

But I hadn't nigh done yet. The Queen's bill was to be took to the Signet Office in Somerset House, Strand—where the stamp shop is. The Clerk of the Signet made "a Signet

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bill for the Lord Keeper of the Privy Seal." I paid him four pound, seven. The Clerk of the Lord Keeper of the Privy Seal made "a Privy-Seal bill for the Lord Chancellor." I paid him, four pound, two. The Privy-Seal bill was handed over to the Clerk of the Patents, who engrossed the aforesaid. I paid him five pound, seventeen, and eight; at the same time, I paid Stamp-duty for the Patent, in one lump, thirty pound. I next paid for "boxes for the Patent," nine and sixpence. Note. Thomas Joy would have made the same at a profit for eighteen-pence. I next paid "fees to the Deputy, the Lord Chancellor's Purse-bearer," two pound, two. I next paid "fees to the Clerk of the Hanaper," seven pound, thirteen. I next paid "fees to the Deputy Clerk of the Hanaper," ten shillings. I next paid, to the Lord Chancellor again, one pound, eleven, and six. Last of all, I paid "fees to the Deputy Sealer, and Deputy Chaff-wax," ten shillings and sixpence. I had lodged at Thomas Joy's over six weeks, and the unopposed Patent for my invention, for England only, had cost me ninety-six pound, seven, and eightpence. If I had taken it out for the United Kingdom, it would have cost me more than three hundred pound.

Now, teaching had not come up but very limited when I was young. So much the worse for me you'll say. I say the same. William Butcher is twenty year younger than me. He knows a hundred year more. If William Butcher had wanted to Patent an invention, he might have been sharper than myself when hustled backwards and forwards among all those offices, though I doubt if so patient. Note. William being sometimes cranky, and consider porters, messengers, and clerks.

Thereby I say nothing of my being tired of my life, while I was Patenting my invention. But I put this: Is it reasonable to make a man feel as if, in inventing an ingenious improvement meant to do good, he had done something wrong? How else can a man feel, when he is met by such

difficulties at every turn? All inventors taking out a Patent must feel so. And look at the expense. How hard on me, and how hard on the country if there's any merit in me (and my invention is took up now, I am thankful to say, and doing well), to put me to all that expense before I can move a finger! Make the addition yourself, and it'll come to ninety-six pound, seven, and eightpence. No more, and no less.

What can I say against William Butcher, about places? Look at the Home Secretary, the Attorney-General, the Patent Office, the Engrossing Clerk, the Lord Chancellor, the Privy Seal, the Clerk of the Patents, the Lord Chancellor's Purse-bearer, the Clerk of the Hanaper, the Deputy Clerk of the Hanaper, the Deputy Sealer, and the Deputy Chaff-wax. No man in England could get a Patent for an Indian-rubber band, or an iron-hoop, without feeing all of them. Some of them, over and over again. I went through thirty-five stages. I began with the Queen upon the Throne. I ended with the Deputy Chaff-wax. Note. I should like to see the Deputy Chaff-wax. Is it a man, or what is it?

What I had to tell, I have told. I have wrote it down. I hope it's plain. Not so much in the handwriting (though nothing to boast of there), as in the sense of it. I will now conclude with Thomas Joy. Thomas said to me, when we parted, "John, if the laws of this country were as honest as they ought to be, you would have come to London—registered an exact description and drawing of your invention—paid half-a-crown or so for doing of it—and therein and thereby have got your Patent."

My opinion is the same as Thomas Joy. Further. In William Butcher's delivering "that the whole gang of Hanapers and Chaff-waxes must be done away with, and that England has been chaffed and waxed sufficient," I agree.

Oakley Inc. v. Sunglass Hut International

U.S. Court of Appeals
Federal Circuit

No. 02-1132

Decided January 9, 2003

PATENTS**[1] Patentability/Validity — Specification — Claim adequacy (§ 115.1109)**

Infringement defendants have failed to raise substantial question as to whether phrase “vivid colored appearance,” in claim for three-layer sunglass lens, renders claim indefinite, since claims are construed as one skilled in art would understand them in light of specification, and patentee need not define invention with mathematical precision in order to satisfy definiteness requirement, since numerical value of “differential effect” used to produce vivid appearance is distinguishing feature over prior art in present case, and specification presents formula for calculating differential effect for several examples in which effect is either great enough to produce “vivid colored appearance” or not, and since, faced with those examples, and comments in specification, person skilled in art would interpret “vivid colored appearance” to require that maximum differential effect equal or exceed about 5.45 percent.

[2] Patentability/Validity — Anticipation — Identity of elements (§ 115.0704)

Infringement defendants have failed to raise substantial question as to whether claimed three-layer sunglass lens is anticipated by prior art lens, since claims cover only lenses having “vivid colored appearance” in which middle layer is “semireflective,” since U.S. Patent and Trademark Office has twice allowed claims at issue over cited reference, and since defendants’ evidence that prior art lens has “semireflective” middle layer is unconvincing.

[3] Patentability/Validity — Anticipation — Identity of elements (§ 115.0704)

Infringement defendants have failed to raise substantial question as to whether sunglass lenses sold more than one year before filing of

application for patent in suit anticipate plaintiff’s claims for three-layer sunglass lens, since declarations submitted by defendants, which merely present conclusory statements that allegedly anticipating lenses had “vivid colored appearance” produced by “differential effect” in accordance with claims at issue, are facially deficient and fail to raise substantial question of anticipation.

[4] Infringement — Construction of claims (§ 120.03)**Infringement — Literal infringement (§ 120.05)**

Plaintiff in action for infringement of patent for three-layer sunglass lens has demonstrated reasonable likelihood of prevailing on infringement issue at trial, since declaration of plaintiff’s optics expert states that thickness of dielectric layer and reflectivity of semireflective layer in accused lenses are within same ranges as embodiments disclosed in plaintiff’s specification, since accused lenses thus should exhibit “differential effect” sufficient to produce claimed “vivid colored appearance,” and since prosecution history does not limit meaning of “vivid colored appearance” in manner that would exclude accused lenses from claims’ coverage.

REMEDIES**[5] Non-monetary and injunctive — Equitable relief — Preliminary injunctions — Patents (§ 505.0707.07)**

Preliminary injunction entered in action for infringement of patent for three-layer sunglass lens is sufficiently specific to satisfy requirements of Fed. R. Civ. P. 65(d), even though it uses plaintiff’s trade names to designate defendants’ enjoined products, since defendants fully understood import of same language when it was used in temporary restraining order, and record and conduct of parties demonstrate that injunction is not unclear to defendants, and since language of injunction is not so vague that defendants are precluded from attempting to “design around” injunction.

Particular patents — Chemical — Lens coating

5,054,902, King, light control with color enhancement, grant of preliminary injunction in infringement action affirmed.

Appeal from the U.S. District Court for the Central District of California, Stotler, J.; 61 USPQ2d 1658.

Action by Oakley Inc. against Sunglass Hut International, Lenscrafters Inc., Ray Ban Sun Optics, Luxottica Group S.p.A., and Leonardo Del Vecchio for patent infringement. Defendants appeal from grant of plaintiff's motion for preliminary injunction. Affirmed; Dyk, J., concurring in separate opinion.

Joseph F. Jennings, Gerard von Hoffmann III, Paul N. Conover, and Joseph S. Cianfrani, of Knobbe, Martens, Olson & Bear, Newport Beach, Calif.; Gregory L. Weeks, Janet Robertson Kaufman, and Gregory K. Nelson, of Weeks, Kaufman & Johnson, Solana Beach, Calif., for plaintiff-appellee.

John M. Benassi, Franklin D. Ubell, and Colbern C. Stuart III, of Brobeck, Phleger & Harrison, San Diego, Calif.; Joseph DiBenedetto, of Winston & Strawn, New York, N.Y.; Anthony W. Shaw, of Brobeck, Phleger & Harrison, Washington, D.C., for defendants-appellants.

Before Newman, Lourie, and Dyk, circuit judges.

Lourie, J.

Sunglass Hut International, Lenscrafters, Inc., Ray Ban Sun Optics, Luxottica Group S.p.A., and Leonardo Del Vecchio (collectively, "Sunglass Hut") appeal from the decision of the United States District Court for the Central District of California granting a preliminary injunction affecting certain of the defendants' sunglass lenses that the court held to be likely to infringe Oakley's U.S. Patent 5,054,902. *Oakley Inc. v. Sunglass Hut Int'l*, 61 USPQ2d 1658, 1662, 1669 (C.D. Cal. 2001). Because the court did not abuse its discretion in ordering the injunction, and because the injunction is not otherwise infirm, we affirm.

BACKGROUND

Oakley owns the '902 patent, issued to William J. King and directed to a sunglass lens. The claimed lens comprises three layers: a substrate, a middle semireflective layer, and an outer dielectric layer. '902 patent, col. 23, ll. 56-66. The reflectance of the semireflective layer and the thickness of the dielectric layer must be such that a "vivid colored appearance" is produced by an interference "differential effect" of light reflected from the lens.

Id. at col. 23, l. 67 to col. 24, l. 66. Claim 1 of the patent, which defines the invention in terms of those limitations, reads as follows:

1. A lens for sunglasses to be worn by a wearer, comprising

a light transmissive substrate constituting the lens body, and having a first side for facing the wearer and a second side of [sic] facing outwardly from the wearer,

a semireflective layer intimately bonded to the second side, and

a dielectric layer over said semireflective layer, said dielectric layer being of substantially uniform thickness,

the reflectance of said semireflective layer and the thickness of said dielectric layer producing, at one or more wavelengths, a *differential effect* in intensity, of reflected light incident upon said lens from the direction faced by said second side, by interference between incident light reflected from said dielectric layer and light transmitted through said dielectric layer and reflected from said semireflective [sic] layer, said differential effect altering the spectral distribution of light in an amount for producing a *vivid colored appearance* formed by said two layers when viewing toward the wearer from the direction faced by said second side.

Id. at col. 23, l. 55 – col. 24, l. 66 (emphases added).

The optics of the differential effect is illustrated in Figure 6(a) of the patent, which follows:

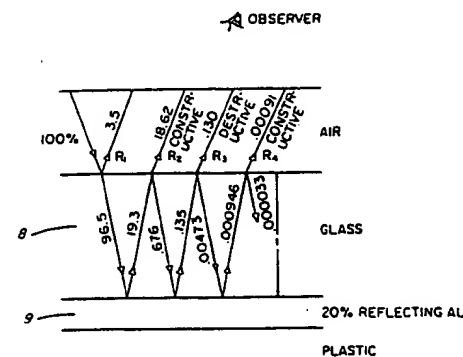


FIG. 6(a)

As this drawing shows, light from the observer side of the lens is transmitted into a

glass dielectric layer 8 towards the wearer (not shown). Within the dielectric layer 8, the light reflects successively between the two interfaces of the dielectric layer 8, each time with diminishing amplitude. Every internal reflection at the glass-air interface transmits light toward the observer, as depicted by rays R_2 , R_3 , and R_4 . The phases of those light rays, after accounting for phase changes at interfaces, are dependent upon the thickness t of the dielectric layer 8, as that thickness determines the path lengths of the internal reflections. Furthermore, the reflectance of the semireflective layer 9 determines the strength of the internal reflections at the glass-air interface and hence the strength of the outwardly emanating rays R_2 , R_3 , and R_4 . By choosing an appropriate thickness of the dielectric layer 8 (i.e., t) and reflectance of the semireflective layer 9, the inventors were able to construct the lens such that the rays R_2 , R_3 , and R_4 constructively and destructively interfere with each other and with R_1 in varying strengths at given wavelengths. The invention of the '902 patent is the basic lens structure depicted in Figure 6(a) having a dielectric thickness and a semireflective reflectance value such that the cumulative effect of the interference among R_1 , R_2 , R_3 , etc. is a "differential effect" producing a "vivid colored appearance" to the observer.

The specification sets forth a formula for calculating the "differential effect," also called "differential level," as follows:

$$\text{Differential Level} = (I_C - I_R) / I_R$$

where I_C is the enhanced intensity of reflected light at a given wavelength λ_C , and I_R is a reference intensity. E.g., *id.* at col. 7, ll. 12-24. The enhanced intensity I_C is the algebraic sum of the reflected rays R_1 , R_2 , R_3 , etc. (e.g., $I_C = R_1 + R_2 - R_3 + R_4$ for the lens shown in Figure 6(a), constructively interfering rays being added, and destructively interfering rays being subtracted). See *id.* at col. 10, ll. 25-28 (omitting the term R_4 because it is negligible). In the formula, different reference intensities are utilized throughout the '902 specification. For example, the formula is first introduced with "the random background intensity" I_B (calculated as $I_B \sim R_1$) used as the reference. *Id.* at col. 7, ll. 12-24. Later, the specification calculates I_B as $R_2 \pm [(R_1 + R_4) - R_3]$. *Id.* at col. 9, ll. 48-58. In other places, the reference is at an "average noncoherent [wavelength] λ_A ," calculated as $R_2 + \frac{1}{2}(R_1 - R_3)$. *Id.* at col. 10, ll.

29-35, 66-68. In still other places, the specification utilizes as the reference the intensity of light at a different wavelength λ_D that is reflected from the lens in a net destructive fashion. E.g., *id.* at col. 10, ll. 42-54.

The '902 specification discloses a number of embodiments, and for each embodiment calculates a differential effect in multiple ways, under multiple circumstances. In the embodiment illustrated in Figure 6(a), reproduced above, in which the reflectance of the semireflective layer 9 is 20%, the specification calculates the differential effect to be 44% above λ_D or 8.3% above λ_A . *Id.* at col. 10, ll. 15-54. When that same embodiment is additionally subjected to light incident from the back surface of the lens, the specification calculates the differential effect above λ_D to be 7.5% in the worst case or 29.8% in a realistic case. *Id.* at col. 12, ll. 22-60. In a similar embodiment, in which the reflectance of the semireflective layer is 30%, the specification calculates the differential effect as 25.96% above λ_D or 5.45% above λ_A . *Id.* at col. 10, l. 58 to col. 11, l. 12. In another embodiment having a different dielectric material, the maximum differential effect is purported to be 405%. *Id.* at col. 11, l. 49.

In distinction to the claimed invention, which includes a "semireflective" middle layer, the patent disclaims the same basic three-layer lens structure having a middle layer that is highly reflective. Such a lens is illustrated in the specification's Figure 5(b), reproduced below:

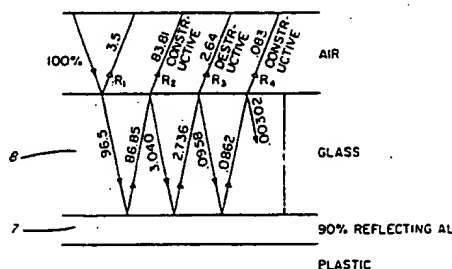


FIG. 5(b)
(PRIOR ART)

As can be seen, the prior art depicted in Figure 5(b) includes a 90% reflectance middle layer 7 where the Figure 6(a) embodiment had a 20% reflectance middle layer 9. The specification calculates the maximum differential effect for that prior art lens to be 2.3%. *Id.* at col. 9, ll. 59-65. The specification explains

that this is a poor result, stating: "Interference colors on such highly reflecting metal surfaces therefore tend to be weak or washed out to the eye because of the small differential intensities involved." *Id.* at col. 10, ll. 11-14.

During prosecution of the application that led to the '902 patent, the patent examiner rejected the claims as being unpatentable over U.S. Patent 3,679,291, issued to Joseph H. Apfel, et al. King overcame that rejection by amending the independent claim to include the phrase "said differential effect altering the spectral distribution of light in an amount for producing a *vivid colored appearance* formed by said two layers when viewing toward the wearer from the direction faced by said second side." While acknowledging that Apfel disclosed a three-layer lens structure resembling his claimed lens structure, King distinguished Apfel's lens from his invention on the basis of the reflectance of the middle layer and the resulting vividness. Specifically, King represented to the examiner that Apfel's middle layer, being a material named INCONEL and having a thickness of 675 Angstroms, had a 94% reflectance. Thus, according to King, Apfel did not disclose or suggest his invention's "vividly colored reflected light produced by interference." The Patent and Trademark Office ("PTO") then issued the '902 patent, and the patentability of claim 1 was later confirmed in a reexamination proceeding.¹

Oakley manufactures sunglasses having metallic green and blue colored lenses that Oakley refers to as "Emerald" and "Ice" respectively. *See Oakley*, 61 USPQ2d at 1668-69. According to Oakley, those lenses have a "vivid colored appearance" and are covered by the '902 patent. Those sunglasses had been marketed exclusively by Sunglass Hut before Luxottica Group S.p.A. purchased Sunglass Hut. *See id.* After the purchase, Sunglass Hut began selling sunglasses manufactured by the other defendants, the lenses of which consist of a polycarbonate substrate with a polysiloxane hard coating, over which is applied a semireflective chromium layer, on which sits a silicon dioxide dielectric layer. *Id.* at 1662.

¹ During reexamination, King corrected a typographical error, changing the word "smireflecting" to "semireflective," but did not otherwise amend claim 1. U.S. Patent B1 5,054,902, col. 1, l. 45 (reexamination certificate).

Alleging that the sunglasses newly marketed by Sunglass Hut contained infringing lenses, Oakley sued Sunglass Hut on November 6, 2001, for, *inter alia*, infringement of the '902 patent, and sought a temporary restraining order ("TRO") and a preliminary injunction. *Id.* at 1660. The court entered the TRO on November 20, and after briefing and argument, entered a preliminary injunction on December 3. *Id.* The preliminary injunction order stated: "Defendants ... are hereby enjoined from making, using, importing, selling, or offering to sell any products with Emerald (green) or Ice (blue) lenses that infringe the '902 patent." *Id.* at 1669.

In granting the preliminary injunction, the court made findings favorable to Oakley on the issues of irreparable harm, the balance of hardships, public interest, and likelihood of success on the merits. *Id.* at 1667-68. Sunglass Hut challenged Oakley's likelihood of success on the merits by arguing that the '902 patent was invalid and not infringed. More specifically, Sunglass Hut made the following invalidity arguments: (1) the phrase "vivid colored appearance" is indefinite, in violation of 35 U.S.C. § 112, ¶ 2, *id.* at 1666; (2) Apfel anticipates the '902 patent claims and King misrepresented Apfel to the PTO, *id.* at 1665; (3) certain Foster Grant sunglass lenses in existence more than one year before the filing of the application that led to the '902 patent anticipate the patent claims, *id.* at 1663; and (4) the claims would have been obvious, in violation of 35 U.S.C. § 103, in view of certain prior art references, *id.* at 1665. The court did not agree with Sunglass Hut that any of its arguments raised a substantial question of invalidity. *See id.* at 1667. On the issue of likelihood of infringement, the court did not accept Sunglass Hut's argument that King's prosecution comments regarding Apfel disclaimed coverage of its products, whose color peaks are less than Apfel's. *Id.* at 1663.

Sunglass Hut appeals from the district court's grant of the preliminary injunction. We have jurisdiction under 28 U.S.C. § 1292(c)(1) in view of 28 U.S.C. §§ 1292(a)(1) and 1295(a)(1).

DISCUSSION

A decision to grant or deny a preliminary injunction is within the sound discretion of the district court, based upon its assessment of four factors: (1) the likelihood of the patentee's success on the merits; (2) irreparable

harm if the injunction is not granted; (3) the balance of hardships between the parties; and (4) the public interest. *Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, 239 F.3d 1343, 1350, 57 USPQ2d 1747, 1751 (Fed. Cir. 2001). We review the district court's decision for an abuse of discretion, a lapse that occurs when the decision is premised on an error of law, a clearly erroneous finding of fact, or a clear error of judgment in weighing the factors. *Id.* To the extent the court's decision depends upon an issue of law, we review that issue *de novo*. *Tate Access Floors, Inc. v. Interface Architectural Resources, Inc.*, 279 F.3d 1357, 1364, 61 USPQ2d 1647, 1652 (Fed. Cir. 2002).

An assessment of the likelihood of infringement, like a determination of patent infringement at a later stage in litigation, requires a two-step analysis. "First, the court determines the scope and meaning of the patent claims asserted . . . [Secondly,] the properly construed claims are compared to the allegedly infringing device." *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1454, 46 USPQ2d 1169, 1172 (Fed. Cir. 1998) (en banc) (citations omitted). Step one, claim construction, is an issue of law. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 970-71, 34 USPQ2d 1321, 1322 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370 [38 USPQ2d 1461] (1996), that we review *de novo*. *Cybor*, 138 F.3d at 1456, 46 USPQ2d at 1172. Step two, comparison of the claim to the accused device, requires a determination that every claim limitation or its equivalent be found in the accused device. *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 29 [41 USPQ2d 1865] (1997). Those determinations are questions of fact. *Bai v. L & L Wings, Inc.*, 160 F.3d 1350, 1353, 48 USPQ2d 1674, 1676 (Fed. Cir. 1998).

An assessment of the likelihood of validity of a patent claim over the prior art also involves a two-step process. The first step is the same claim construction implicated in an infringement analysis. See *Smiths Indus. Med. Sys., Inc. v. Vital Signs, Inc.*, 183 F.3d 1347, 1353, 51 USPQ2d 1415, 1418-19 (Fed. Cir. 1999). The second step involves a comparison of the asserted claims with the prior art. A determination that a claim is invalid as being anticipated or lacking novelty under 35 U.S.C. § 102 requires a finding that "each and every limitation is found either expressly or inherently in a single prior art reference." *Celeritas*

Techs. Inc. v. Rockwell Int'l Corp., 150 F.3d 1354, 1360, 47 USPQ2d 1516, 1522 (Fed. Cir. 1998). Whether a claim would have been obvious within the meaning of 35 U.S.C. § 103 is a question of law based on underlying findings of fact. *Smiths*, 183 F.3d at 1354, 51 USPQ2d at 1419-20 (citing *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 [148 USPQ 459] (1966)). We review a district court's underlying findings of fact for clear error, while we rule *de novo* on the ultimate issue of obviousness. *Id.* at 1355, 51 USPQ2d at 1419-20. Because an issued patent is presumed to be valid, 35 U.S.C. § 282 (2000), the evidentiary burden to show facts supporting a conclusion of invalidity is clear and convincing evidence, *WMS Gaming Inc. v. Int'l Game Techs.*, 184 F.3d 1339, 1355, 51 USPQ2d 1385, 1396-97 (Fed. Cir. 1999).

In the context of a preliminary injunction, while "the burden of proving invalidity is with the party attacking validity," the party seeking the injunction "retain[s] the burden of showing a reasonable likelihood that the attack on its patent's validity would fail." *H.H. Robertson Co. v. United Steel Deck, Inc.*, 820 F.2d 384, 387, 2 USPQ2d 1926 (Fed. Cir. 1987). When the presumptions and burdens applicable at trial are taken into account, the injunction should not issue if the party opposing the injunction raises "a substantial question concerning infringement or validity, meaning that it asserts a defense that [the party seeking the injunction] cannot prove lacks substantial merit." *Tate Access Floors*, 279 F.3d at 1365, 61 USPQ2d at 1652 (internal quotation marks omitted); *New Eng. Braiding Co. v. A.W. Chesterton Co.*, 970 F.2d 878, 883, 23 USPQ2d 1622, 1626 (Fed. Cir. 1992) ("While it is not the patentee's burden to prove validity, the patentee must show that the alleged infringer's defense lacks substantial merit").

Whether the terms of an injunction fulfill the mandates of Federal Rule of Civil Procedure 65(d) is a question of law that we review *de novo*. *Signtech USA, Ltd. v. Vutek, Inc.*, 174 F.3d 1352, 1356, 50 USPQ2d 1372, 1374 (Fed. Cir. 1999) (citing *Additive Controls & Measurements Sys., Inc. v. Flowdata, Inc.*, 986 F.2d 476, 479-80, 25 USPQ2d 1798, 1801 (Fed. Cir. 1993)).

Sunglass Hut argues in this appeal that it raised below substantial questions concerning, *inter alia*, the indefiniteness, anticipation, and

noninfringement of the '902 patent claims. Sunglass Hut also contends that the court clearly erred in evaluating irreparable harm and the balance of hardships. Finally, Sunglass Hut contends that the court's injunctive order fails to comply with the specificity requirements of Fed. R. Civ. P. 65(d).

A. Claim Definiteness

Sunglass Hut argues that the phrase "vivid colored appearance" appearing in claim 1 is indefinite. Even if vividness is based on the disclosed "differential effect," according to Sunglass Hut, one skilled in the art cannot tell which values of differential effect qualify as vivid and which do not. Sunglass Hut further contends that the district court did not and could not define the bounds of the phrase.

Oakley responds that the phrase can be defined from the structure, formula, and examples disclosed in the patent. Oakley cites the proposition that compliance with section 112, paragraph 2, does not require a particular number as a cutoff. According to Oakley, the specification's numerical examples, including some values of differential effect that do create a "vivid colored appearance" and one that does not, are sufficient.

We agree with Oakley that Sunglass Hut has not raised a substantial question as to whether the phrase "vivid colored appearance" renders the claims indefinite in violation of 35 U.S.C. § 112, ¶ 2. That paragraph provides: "The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention." 35 U.S.C. § 112, ¶ 2 (2000). "The primary purpose of the definiteness requirement is to ensure that the claims are written in such a way that they give notice to the public of the extent of the legal protection afforded by the patent, so that interested members of the public, e.g., competitors of the patent owner, can determine whether or not they infringe. That determination requires a construction of the claims according to the familiar canons of claim construction." *All Dental Prodx, LLC v. Advantage Dental Prods.*, 309 F.3d 774, 779-80, 64 USPQ2d 1945, 1949 (Fed. Cir. 2002) (citations omitted).

One of those canons is that claims are construed as one skilled in the art would understand them in light of the specification of which they are a part. *Orthokinetics, Inc. v.*

Safety Travel Chairs, Inc., 806 F.2d 1565, 1575, 1 USPQ2d 1081, 1088 (Fed. Cir. 1986). Indeed, a patentee may be his or her own lexicographer by defining the claim terms. Another one of those canons is that a patentee need not define his invention with mathematical precision in order to comply with the definiteness requirement. *In re Marosi*, 710 F.2d 799, 802-03, 218 USPQ 289, 292 (Fed. Cir. 1983). In *Marosi*, we held that the phrase "essentially free of alkali metal" was not indefinite, where the specification defined it as containing only residual impurities, such as 4 ppm (parts per million). *Id.* at 802, 218 USPQ at 292. *Marosi* disclaimed a level of 3819 ppm disclosed in the prior art, and the PTO took the position that one skilled in the art would not know where to draw the line between 4 ppm and 3819 ppm. *Id.* We sided with *Marosi*, explaining that his invention "does not reside in such a number" and that a skilled artisan would draw that line between unavoidable impurities and essential ingredients. *Id.* at 803, 218 USPQ at 292.

[1] Unlike the situation in *Marosi*, the numerical value of the differential effect in this case is a distinguishing feature over the prior art. That is so because the language of the claim associates vividness with the differential effect, and the specification presents examples of numerical values of the differential effect that either qualify as vivid or do not. More precisely, the language of the claim itself confirms that the lens's "vivid colored appearance" results directly from the "differential effect." '902 patent, col. 24, ll. 62-64 (reciting "said differential effect . . . producing a vivid colored appearance" in claim 1). Moreover, the claim itself defines the lens's structural attributes that produce the "differential effect." *Id.* at col. 24, ll. 67-69 (reciting "the reflectance of said semireflective layer and the thickness of said dielectric layer producing . . . a differential effect").

Accordingly, the specification presents a formula for calculating the differential effect for a number of examples in which the differential effect is either great enough to produce a "vivid colored appearance" or not. Those values that qualify as producing a "vivid colored appearance" range from 5.45% to 405% under various circumstances, whereas the only disclosed value of maximum differential effect that does not produce a "vivid colored appearance" is 2.3%. *Id.* at col. 9, ll. 59-65. Thus,

while the specification does not indicate so explicitly, the dividing line must be somewhere between 2.3% and 5.45%. Although the difference between those values is seemingly slight, and comparison of one differential effect value to another may present an apples-to-oranges problem due to the different reference intensities involved, the specification purports to indicate that the difference is significant, brushing aside any comparison difficulties. See '902 patent, col. 11, ll. 5-16 (purporting that differential effects of 5.45% above λ_D and 25.96% above λ_A are "much larger than the ~ 2.2% found for the 90% reflecting case" (emphasis added)); see also *id.* at col. 12, ll. 37-40 (purporting that 7.5% is "much greater than that obtained (~ 2.2%) for a 90% reflecting layer case" (emphasis added)). Faced with those examples and comments, we conclude that one skilled in the art would, in reasonable likelihood, understand that a lens exhibiting a maximum differential effect not substantially greater than 2.2% does not have a "vivid colored appearance."

Indeed, we conclude that one skilled in the art would interpret the phrase "vivid colored appearance" in light of the specification to require that the maximum differential effect equal or exceed about 5.45%, and we thus construe the phrase for purposes of the preliminary injunction.

That is not to say that Sunglass Hut cannot ultimately succeed on the merits of its indefiniteness argument later in the litigation, after further development of the record. We simply hold that, recognizing the presumption of validity and the fact that the '902 patent has already been subjected to reexamination, Oakley has at this point in the case shown that it is reasonably likely to withstand such a validity challenge.

B. Anticipation

1. Apfel

Sunglass Hut, once again attempting to take another bite at Apfel, argues that Apfel, particularly Figures 1-5 of the Apfel patent, anticipates claim 1. According to Sunglass Hut, the PTO allowed the '902 patent claims over Apfel only because King misrepresented to the PTO that Apfel's middle layer of INCONEL is 94% reflective, rather than "semireflective," as called for in claim 1. To support its allegation of misrepresentation, Sunglass

Hut points to other, allegedly inconsistent statements by King concerning Apfel.

Oakley responds that Apfel's middle layer is highly reflective and thus no different from the admitted prior art depicted in Figure 5(b) of the '902 patent. Oakley also contends that the PTO twice allowed the '902 patent claims over Apfel, and that King's statements concerning the reflectivity of Apfel's INCONEL layer, when properly understood, are neither inconsistent nor misrepresentative of the facts of Apfel's disclosure.

Sunglass Hut's Apfel argument succeeds no better here than it has previously. We agree with Oakley that Apfel, like Figure 5(b), is different from what is claimed in the '902 patent. Apfel discloses a number of multilayer lenses, the relevant one of which is a three-layer lens depicted in Figure 1. '291 patent, fig. 1. The three layers are a substrate 21, a metal layer 26, and a dielectric layer 27, in that order. *Id.* at col. 2, ll. 40-51. The metal layer 26 is further described as being INCONEL 67.5 millimicrons thick. *Id.* at col. 3, ll. 19-21, 28-30. Apfel states that an object of his invention is to provide "strong color." *Id.* at col. 1, ll. 33-36, col. 3, ll. 60-62. Whether Apfel's "strong color" equates with "vivid colored appearance" as that phrase is used in the '902 patent we need not decide,² for the '902 patent claims cover only three-layer lenses having a "vivid colored appearance," provided, *inter alia*, that the middle layer is "semireflective."

Sunglass Hut's only evidence that Apfel's metal layer 26 is "semireflective" seems to be King's deposition testimony that INCONEL's reflectance is "very low" and King's statements during prosecution of another patent application, in which Sunglass Hut contends that King stated that the same reflectance is 20%. Both of those statements, according to Sunglass Hut, contradict King's statement before the PTO during prosecution of the application that led to the '902 patent that Apfel's metal layer 26 is a "thick metal layer (675 Angstroms of Inconel) which is essentially a mirror having 94% reflectance."

² Sunglass Hut argues that King admitted during his deposition that the terms "vivid" and "strong" are synonymous. We consider that testimony to be of little value in the definiteness analysis or claim construction. See *Solomon v. Kimberly-Clark Corp.*, 216 F.3d 1372, 1379-80, 55 USPQ2d 1279, 1283-84 (Fed. Cir. 2000).

[2] The district court found Sunglass Hut's evidence unconvincing, noting that the PTO twice allowed the '902 claims over Apfel. *Oakley*, 61 USPQ2d at 1665. We perceive no clear error in that finding. First, Sunglass Hut's interpretation of King's prosecution comments in the other patent application is a strained one. Secondly, King's apparently inconsistent deposition comment can be squared with his prosecution statements by the fact that the reflectance of a layer of INCONEL depends upon the thickness of the layer.

In sum, Sunglass Hut has not raised a substantial question whether Apfel anticipates the '902 patent claims. Of course, as the litigation progresses Sunglass Hut may try to present even more evidence (e.g., physical measurements of the lenses Apfel describes) that Apfel's metal layer 26 is "semireflective" and that Apfel's disclosed lenses otherwise satisfy all of the claim limitations.

2. Foster Grant

Sunglass Hut next argues that certain sunglass lenses sold by Foster Grant more than one year before the filing of King's application are prior art to the '902 patent under 35 U.S.C. § 102(b). To support this assertion, Sunglass Hut submitted a number of declarations describing the Foster Grant lenses. According to Sunglass Hut, those declarations corroborate each other and are corroborated by contemporaneous memoranda. Sunglass Hut contends that the court failed to recognize that corroboration and, moreover, misread the declarations when it found that the Foster Grant lenses were like those depicted in Figure 5(b) in the '902 patent and therefore lacked a "vivid colored appearance."

Oakley responds that the declarations do not establish that the reflectance of the middle layer and thickness of the dielectric layer in the Foster Grant lenses created a differential effect, as claim 1 requires. Oakley also contends that the supposed corroboration is similarly deficient, and that the declarations cannot cross-corroborate each other.

[3] We agree with Oakley that the district court's finding that the Foster Grant declarations fail to raise a substantial question of anticipation is not clearly erroneous. While the Foster Grant declarations do state that the Foster Grant prior art lenses had a "vivid colored appearance" produced by a "differential effect between light reflected from the dielec-

tric and light transmitted through the dielectric and reflected from the semireflective [chromium layer]," e.g., Declaration of Theodore A. Haddad at 5, *Oakley*, (No. SA CV 01-1065 AHS), such statements are conclusory. For example, no basis is provided to explain why the chromium layer is asserted to be "semireflective." Moreover, the declarations fail to address whether the thickness of the dielectric layer is causally related to the alleged differential effect. As another example, there is no quantitative assessment of the differential effect to support the conclusion that a "vivid colored appearance" is produced.

Because the Foster Grant declarations are facially deficient, whether corroborated or not, we need not address the corroboration issue. We caution again that our decision on this issue at this stage in the case carries no implication that Sunglass Hut cannot prevail on the merits after fuller development of the evidence.

We have considered Sunglass Hut's other arguments concerning the validity of the '902 patent, including its argument that it raised a substantial question of obviousness under 35 U.S.C. § 103. Those arguments are not persuasive at this stage, and we now conclude that Oakley is reasonably likely to succeed on the merits at trial against all of Sunglass Hut's validity challenges.

C. Infringement

The preliminary injunction against Sunglass Hut can be upheld only if Oakley has demonstrated a reasonable likelihood of prevailing on the infringement issue at trial. *See Amazon.com*, 239 F.3d at 1350-51, 57 USPQ2d at 1751. Oakley can meet that burden, once the construction of the relevant claim limitations has been settled, with evidence that each claim limitation is likely present in the accused lenses. *See id.*

In this case, we, not the district court, have provided the construction of one of the relevant claim limitations — "vivid colored appearance." Because the parties before the district court did not have the benefit of our construction in terms of quantitative differential effect, Oakley did not present evidence of infringement tracking that construction; nor did Sunglass Hut have an opportunity to respond to the infringement issue in terms of that construction. Rather than construing the language and determining whether the accused lenses

meet that aspect of the claims, the district court focused its infringement analysis on the structure of the accused lenses. In particular, the court made factual findings regarding the thickness of the accused's dielectric layer, *Oakley*, 61 USPQ2d at 1662 (paragraph 23), and the reflectivity of the accused's semireflective layer, *id.* at 1663 (paragraph 28). Sunglass Hut does not challenge those findings. Accepting those findings, we are faced with the question whether it is reasonably likely that the patentee would establish at trial that the accused lenses satisfy the "vivid colored appearance" limitation as we have construed that language. If so, then remand would be an inefficient use of judicial resources.

[4] We conclude that the court's undisputed factual findings do establish that Oakley has indeed shown a likelihood of infringement. In making the pertinent factual findings regarding the structure of the accused lenses, the district court relied heavily on the declaration of Oakley's optics expert, Dr. Jack Feinberg. As explained in the part of that declaration cited by the court, the thickness of the dielectric layer and the reflectivity of the semireflective layer in the Sunglass Hut lenses are within the same ranges as the embodiments disclosed in the '902 patent's specification. Because those disclosed embodiments have a differential effect sufficient to produce a "vivid colored appearance," the accused lenses should necessarily also exhibit a differential effect that produces a "vivid colored appearance." It follows that Oakley's evidence of structural similarity is indirect evidence of a sufficiently high differential effect. Thus, the district court's factual findings support its conclusion that the accused lenses are likely to infringe.

Sunglass Hut argues that the prosecution history limits the meaning of the phrase "vivid colored appearance" to color peaks having a magnitude greater than those depicted in Apfel's Figure 4. Because the accused lenses have smaller color peaks, Sunglass Hut contends that they cannot infringe. Oakley responds that Sunglass Hut did not propose such a construction to the district court, and that we should therefore not consider it. Oakley further responds that the prosecution history distinguished Apfel on the basis of the lens structure, not the magnitude of color peaks. Oakley further contends that Sunglass Hut's proposed construction of the phrase "vivid colored appearance" would ex-

clude the preferred embodiment, and that Sunglass Hut has not disputed that the accused lenses are similar to the '902 patent's preferred embodiment.

Sunglass Hut's proposed construction of the phrase "vivid colored appearance" is based on an incorrect reading of the prosecution history. As discussed above, King distinguished his invention from Apfel during prosecution on the basis of the lens structure, specifically the fact that Apfel's middle layer 26 was not "semireflective." Although King also stated that Apfel's "Figure 4 does not indicate a strong color peak," that one vague statement from the prosecution history does not have much bearing on the meaning of the claim phrase "vivid colored appearance," which we derive from the specification's clear teachings, as detailed above. Sunglass Hut has therefore not made convincing arguments that the district court erred in finding a reasonable likelihood that Oakley would succeed on the merits of its infringement assertion.

In sum, because Oakley presented evidence sufficient to establish a likelihood of infringement, we affirm the district court's finding of a likelihood of infringement.³

D. Non-Merits Factors

1. Irreparable Harm

Sunglass Hut principally argues that because Oakley failed to make a strong showing of likely success on the merits, irreparable harm cannot be presumed. Oakley responds that it is entitled to the presumption. Furthermore, Oakley contends that it established actual irreparable harm by evidence of exclusive market share and Sunglass Hut's sizable impending marketing efforts.

We agree with Oakley that it has made a sufficiently strong showing of likelihood of

³ Although we uphold the court's finding of a likelihood of infringement, we caution that we do so under a claim construction that is preliminary. Just as a district court can issue "tentative" or "rolling" claim constructions when "faced with construing highly technical claim language on an expedited basis," such as in a preliminary injunction proceeding, *Jack Gutman, Inc. v. Kopykake Enters., Inc.*, 302 F.3d 1352, 1361, 64 USPQ2d 1302, 1318 (Fed. Cir. 2002), our claim construction is based on the same preliminary record and is therefore likewise preliminary. We also note that, even assuming the district court retains our claim construction at trial, Oakley's proof of infringement and Sunglass Hut's arguments for noninfringement may be augmented.

success on the merits to entitle it to a presumption of irreparable harm. *See Amazon.com*, 239 F.3d at 1350, 57 USPQ2d at 1751 ("Irreparable harm is presumed when a clear showing of patent validity and infringement has been made."). While the merits issues discussed above are close, they favor Oakley. Thus, we agree with the district court that Oakley has established a presumption of irreparable harm. In fact, because the district court found that Sunglass Hut was poised to release "huge numbers" of the enjoined sunglasses, *Oakley*, 61 USPQ2d at 1668, the presumption is well-supported. That finding is not clearly erroneous.

2. Balance of Hardships

Sunglass Hut argues that the court performed no true balancing when the court likened Sunglass Hut's hardship to that of the typical infringer. According to Sunglass Hut, it is the party suffering irreparable harm by having to recall products on the shelf. Oakley responds that the court did properly balance the hardships, and that Sunglass Hut's claim of irreparable harm on its part is belied by its press release following the issuance of the TRO admitting that sales to that point had been "insignificant."

We conclude that the court's factual finding regarding the balance of hardships is not clearly erroneous. The court expressly acknowledged that the injunction would cause Sunglass Hut some hardship, *id.*, but the court determined that the harm to Oakley without issuance of the injunction would be greater. That determination was supported by ample evidence and was not clearly erroneous.

E. Adequacy of the Injunctive Order Under Rule 65(d)

Sunglass Hut's final argument is that the injunctive order does not satisfy the specificity requirement of Fed. R. Civ. P. 65(d) because Sunglass Hut does not sell lenses or sunglasses denominated "Ice (blue)" or "Emerald (green)," which are Oakley's trade names. Sunglass Hut further contends that the order is not limited to the accused lenses, nor does it specify which shades of green or blue are infringing. According to Sunglass Hut, its recall may have been too broad or too narrow, and the order's vagueness prevents it from designing around the patent.

Oakley responds that the order's reference to colors is sufficiently specific, and that the

order is clear in the context of the record in this case. Moreover, according to Oakley, Sunglass Hut understands the scope of the order, as evidenced by its response to the TRO.

We agree with Oakley that the order complies with Rule 65(d), which states:

Every order granting an injunction and every restraining order shall set forth the reasons for its issuance, shall be specific in terms, shall describe in reasonable detail, and not by reference to the complaint or other documents, the act or acts sought to be restrained

Fed. R. Civ. P. 65(d). The purposes of that rule are to minimize confusion as to how the enjoined party can conform its conduct with the order, *Int'l Longshoremen's Ass'n, Local 1291 v. Phila. Marine Trade Ass'n*, 389 U.S. 64, 74 (1967), and to minimize needless contempt proceedings, *Additive Controls*, 986 F.2d at 480, 25 USPQ2d at 1801. We have held that an injunctive order runs afoul of Rule 65 when it "does not use specific terms or describe in reasonable detail the acts sought to be restrained" and it "does not limit its prohibition to the manufacture, use, or sale of the specific infringing devices, or to [those] no more than colorably different from the infringing devices." *Id.* at 479, 25 USPQ2d at 1801. We have even upheld an injunctive order employing nonspecific language on the ground that the detailed record of the case ameliorated any risk of unwarranted contempt actions. *Signitech USA*, 174 F.3d at 1359, 50 USPQ2d at 1377 (holding that an injunction prohibiting "any further infringement of the . . . patent" complies with Rule 65(d)).

[5] The language of the present order is sufficiently specific. It is true that it is directed only at Sunglass Hut products having two particular types of lenses, designated by trade names of Oakley: "Emerald (green)" and "Ice (blue)." *Oakley*, 61 USPQ2d at 1669. Thus, the order's reference to Oakley's "Emerald" and "Ice" trade names in relation to Sunglass Hut's products is arguably incorrect as a technical matter; however, such a flaw amounts to no more than a harmless error. Indeed, Sunglass Hut fully understood the same language appearing in the TRO. *See Oakley Inc. v. Sunglass Hut Int'l*, No. SA 01-1065 at 3 (C.D. Cal. Nov. 20, 2001) (Temporary Restraining Order and Order to Show Cause Why a Preliminary Injunction Should Not Issue). Sunglass Hut publicly commented in a

press release the following day that the TRO "applie[d] to only three models." Thus, the record of the case and the conduct of the parties demonstrate that the language of the preliminary injunction is not unclear to Sunglass Hut.

Sunglass Hut's argument that it cannot with any degree of certainty attempt to design around the preliminary injunction likewise fails in light of the record of this case. Whether Sunglass Hut can redesign the two types of enjoined lenses such that they are not likely to be found infringing is an open question. If, for example, Sunglass Hut can produce lenses having a demonstrable maximum differential effect less than about 5.45%, such lenses would not literally infringe the '902 patent claims by failure to have a "vivid colored appearance," as we have construed that phrase for purposes of the preliminary injunction. The district court might conclude that such a redesign is not reasonably likely to infringe the '902 patent. In any event, the wording of the order is sufficiently clear and leaves open to Sunglass Hut such avenues of argument.

In sum, we perceive no legal error in the district court's wording of the preliminary injunction.

CONCLUSION

The district court did not abuse its discretion in granting the preliminary injunction, and the injunctive order complies with Rule 65(d). Accordingly, we

AFFIRM.

Dyk, J., concurring.

This is a close and difficult case. I generally agree with the majority opinion, but write separately to emphasize three points. First, the majority's tentative claim construction in response to the indefiniteness argument may or may not be correct. Presumably at trial those of ordinary skill in the art will testify as to whether the specification should be so interpreted by the skilled artisan. At the preliminary injunction stage the claims enjoy a presumption of validity. Appellants have not shown that a person having ordinary skill in the art could not interpret the language of the claims in a sufficiently definite manner. That skilled artisan would have the details provided in the written description including specific

examples. The record before us, in view of the presumption of validity of the claims, is simply insufficient for us to conclude that Oakley has failed to meet its burden of showing a likelihood of success on the merits of the validity of the claims under 35 U.S.C. § 112, ¶ 2, or that appellants have raised a "substantial question" of invalidity. *Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, 239 F.3d 1343, 1358-59 [57 USPQ2d 1747] (Fed. Cir. 2001).

Second, in my view, we should not be applying a new claim construction to the facts of this case to uphold a district court's discretionary preliminary injunction as the majority does, *ante* at 19-20. See *Bell & Howell Document Mgmt. Prods. Co. v. Altek Sys.*, 132 F.3d 701, 708, 45 USPQ2d 1033, 1040 (Fed. Cir. 1998) ("Because the district court determined the likelihood of infringement based on an incorrect claim construction, we must remand for a determination whether [plaintiff] has shown that it will likely succeed in proving infringement."); see also *Guttman v. Kopykake Enters.*, 302 F.3d 1352, 1362, 64 USPQ2d 1302, 1309 (Fed. Cir. 2002) (refusing to remand to the district court with instructions to enter a preliminary injunction because "the trial court has not yet passed on whether, under the proper claim construction, [the patentee] is likely to show infringement [and] the resolution of this issue necessarily involves factual determinations that rest within the province of the trial court, not the appellate court"). However, it is sufficient to establish a likelihood of success on infringement at this stage that there was expert testimony that the accused lenses had a vivid colored appearance, and no evidence to the contrary. *Oakley Inc. v. Sunglass Hut Int'l*, 61 USPQ2d 1658, 1662-63 (N.D. Cal. 2001). Appellants offered no claim construction at the preliminary injunction stage. There was no error on the part of the district court in failing to provide an explicit formal claim construction. The district court sufficiently performed its obligation when applying the facts to the claims as presently understood by the district court. See *Sofamor Danek Group, Inc. v. DePuy-Motech, Inc.*, 74 F.3d 1216, 1221, 37 USPQ2d 1529, 1532 (Fed. Cir. 1996) ("[T]he trial court has no obligation to interpret [a claim] conclusively and finally during a preliminary injunction proceeding A trial court may exercise its discretion to interpret the claims at a time when the parties have presented a full

picture of the claimed invention and prior art."'). The appellants' sole argument against infringement was that it was practicing the prior art, which we have held is not a defense to infringement. *Tate Access Floors, Inc. v. Interface Architectural Res., Inc.*, 279 F.3d 1357, 1366, 61 USPQ2d 1647, 1654 (Fed. Cir. 2002).

Finally, the parties at trial are free to offer new claim constructions to the district court and evidence as to why the accused lenses do or do not infringe under those claim constructions. *Guttman*, 302 F.3d at 1361, 64 USPQ2d at 1308 ("[A]ll findings of fact and conclusions of law at the preliminary injunction stage are subject to change upon the ultimate trial on the merits."').

AK Steel Corp. v. Sollac & Ugine

U.S. District Court
Southern District of Ohio
Nos. C-1-98-690, C-1-98-804
Decided July 30, 2002

JUDICIAL PRACTICE AND PROCEDURE

[1] Procedure — Discovery — Matters discoverable — Work product privilege (§ 410.4002.05)

Special master did not err in recommending denial of patent infringement plaintiff's motion to compel discovery of defendants' documents containing results of certain tests conducted on production line, since Fed. R. Civ. P. 26(b)(3) provides work-product protection for "all documents and tangible things ... prepared in anticipation of litigation or for trial," such as documents at issue, and does not merely protect "mental impressions, conclusions, opinions, or legal theories of an attorney," as plaintiff contends.

[2] Procedure — Discovery — Matters discoverable — Work product privilege (§ 410.4002.05)

Patent infringement plaintiff has not demonstrated that obtaining substantial equivalent of defendants' documents containing results of certain tests conducted on production line would subject plaintiff to undue hardship,

since plaintiff has not shown that defendants would not allow plaintiff access to production line in order to perform its own tests, or that defendants' personnel, who have expertise to aid plaintiff in conducting necessary tests, would be unwilling to do so.

[3] Procedure — Evidence — Expert testimony (§ 410.3703)

Procedure — Discovery — Matters discoverable — In general (§ 410.4002.01)

Patent infringement defendants did not waive work-product protection provided by Fed. R. Civ. P. 26(b)(3) by submitting, with their second motion for summary judgment, expert report based on testing that is subject of documents sought in discovery, or by eliciting expert opinion testimony about testing during deposition; although defendants may not assert work-product protection for test data and then use that data as evidence, expert report relied solely on test results already disclosed by defendants, and defendants have not used expert's testimony in any way, or designated expert as witness under Rule 26(a)(2)(A), thus making him nontestifying witness whose testimony is not discoverable absent showing of "exceptional circumstances" under Rule 26(a)(2)(4)(B).

PATENTS

[4] Patentability/Validity — Specification — Enablement (§ 115.1105)

Special master's finding that four claims of plaintiff's patent are invalid for lack of enablement is not erroneous, even though patent discloses at least one claimed enablement, since patent at issue claims stainless steel strips hot-dipped in aluminum bath containing up to about 10 percent silicon by weight, and aluminum coating, whether it contains 0.5 percent or 8.0 percent silicon by weight, is part of claimed product, since patent specification therefore must teach person of ordinary skill in art how to coat stainless steel strip with full range of coatings, and since patent's disclosure of steel strip with aluminum coating containing up to about 0.5 percent silicone by weight does not enable entire claimed range; plaintiff's contention that enablement requirement is met if written description enables any mode of making and using invention confuses different methods of making claimed product